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IS 6123 (1971): Seer Fish (*scomberomorus* spp.), Fresh [FAD  
12: Fish and Fisheries Products]



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IS : 6123 - 1971

*Indian Standard*  
SPECIFICATION FOR  
SEER FISH (*SCOMBEROMORUS* SPP.), FRESH

UDC 637.567.227



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MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 1

Price Rs 2.50 **Gr 2**

October 1971

# Indian Standard

## SPECIFICATION FOR

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MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
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# *Indian Standard*

## SPECIFICATION FOR

### SEER FISH (*SCOMBEROMORUS* SPP.), FRESH

#### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 31 May 1971, after the draft finalized by the Fish and Fisheries Products Sectional Committee had been approved by the Agricultural and Food Products Division Council.

**0.2** Seer fish, locally known as *SURMAI*, is landed in considerable quantities throughout our coast line. It is considered as one of the highly esteemed food fishes and has a very good demand in the fresh state for internal consumption. The formulation of this standard has been felt necessary with a view to making available fresh seer fish of desired quality and helping in selecting raw material for freezing and canning purposes.

**0.2.1** The formulation of this standard has been undertaken at the instance of Army Food Purchase Organization, Quartermaster General's Branch, Army Headquarters.

**0.3** In the preparation of this standard, due consideration has been given to the provisions of the Prevention of Food Adulteration Act, 1954, and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under this Act, wherever applicable.

**0.4** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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#### 1. SCOPE

**1.1** This standard prescribes the requirements and the methods of sampling and test for seer fish (*Scomberomorus* spp.), fresh.

**1.1.1** The term 'seer fish' shall apply to the following commercial species:

- a) *Scomberomorus guttatum*,
- b) *Scomberomorus commersonii*,
- c) *Scomberomorus lineotatus*, and
- d) *Scomberomorus kuhillii*.

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\*Rules for rounding off numerical values (revised).

## 2. TERMINOLOGY

**2.0** For the purpose of this standard, the following definition shall apply.

**2.1 Weight** — The weight of a single seer fish in kilograms.

## 3. TYPES

**3.1** Fresh seer fish shall be of the following two types:

- a) Whole, round; and
- b) Eviscerated, head-on.

## 4. GRADES

**4.1** The material shall be of the following three grades:

Grade Designation	Weight in kg	
	Whole	Eviscerated
Large	Above 5	Above 3.75
Medium	2 to 5	1.50 to 3.75
Small	Below 2	Below 1.50

## 5. REQUIREMENTS

**5.1** The material shall be clean, wholesome and fresh and shall not show any sign of spoilage. The material shall be handled and transported under sanitary conditions [see IS : 4303 (Part I)-1967\*].

**5.2** The material shall be washed in clean potable water to remove all adhering impurities and shall be iced immediately in suitable containers. The washed seer fish, preferably precooled, shall be properly and adequately iced in suitable containers. Eviscerated fish shall be prepared by removing the entrails, air bladder and membrane of the gut cavity and finally washing well with potable water containing 5 ppm of chlorine.

**5.3** The temperature of fish in the container shall not exceed 5°C at any time.

**5.4** The material shall also conform to the requirements prescribed in Table 1.

**5.5** The material may also satisfy the microbiological limits given in Table 2.

NOTE — The microbiological limits are of recommendatory nature only.

\*Code for sanitary conditions, handling and transport in fish industry: Part I Pre-processing stage.

**TABLE 1 REQUIREMENTS FOR SEER FISH (*SCOMBEROMORUS SPP.*), FRESH**

(Clause 5.4)

Sl No. (1)	CHARACTERISTIC (2)	REQUIREMENT (3)	METHOD OF TEST (REF TO APPENDIX) (4)
i)	Colour of the fish	Characteristic colour	—
ii)	Colour and appearance of eyes	Bright	—
iii)	Gills	Bright red and almost free from discoloured mucous	—
iv)	Appearance of skin	Clean	—
v)	Colour of flesh	Characteristic colour	—
vi)	Meat and stomach portion	Firm, shall not leave a mark when lightly pressed with finger	—
vii)	Odour	Characteristic odour	—
viii)	Flavour on cooking	Characteristic flavour	A
ix)	Texture on cooking	Firm, soft and non-fibrous	A

**TABLE 2 MICROBIOLOGICAL LIMITS OF SEER FISH (*SCOMBEROMORUS SPP.*), FRESH**

(Clause 5.5)

Sl No. (1)	CHARACTERISTIC (2)	REQUIREMENT (3)	METHOD OF TEST, REF TO APPENDIX IN IS : 2885-1964* (4)
i)	Total bacterial count/g, <i>Max</i>	100 000	B
ii)	<i>E. coli</i> /g, <i>Max</i>	20	C
iii)	<i>Salmonella</i>	Nil	D

\*Specification for frozen frog legs.

**6. PACKING AND MARKING**

**6.1 Packing**— The material shall be packed in containers such as polythene lined dealwood boxes of sufficient strength to withstand the stress and strain



during transportation. The seer fish shall be adequately covered with crushed ice allround, with an additional layer on top. Insulated containers may be preferably used for transportation in uninsulated carriers. The containers shall be of such material that it does not impair the quality of the material in any way.

**6.2 Marking** — The containers shall be marked or labelled with the following particulars:

- a) Name, type and grade of the material;
- b) Name and address of the vendor;
- c) Date of packing;
- d) Net weight of fish in kilograms; and
- e) Lot number and code.

## 7. SAMPLING

**7.1** The method of drawing representative samples of all the material for tests and the criteria for conformity shall be according to the method prescribed in Appendix B.

## 8. TESTS

**8.1** Tests shall be carried out as prescribed in col 4 of Table 1.

# APPENDIX A

[Table 1, Items (viii) and (ix)]

## DETERMINATION OF FLAVOUR AND TEXTURE

### A-1. METHOD

**A-1.1** Determine the flavour and texture of the material after cooking as given in A-1.1.1.

**A-1.1.1** Place a transverse section of fish in boilable film pouch with some salt for taste. Immerse in boiling water and cook for internal temperature of the muscle reaches 70°C in about 20 minutes. Cool and determine the flavour and texture.

## APPENDIX B

(Clause 7.1)

**SAMPLING OF SEER FISH (*SCOMBEROMORUS* SPP.), FRESH****B-1. GENERAL REQUIREMENTS FOR SAMPLING**

**B-1.1** The samples after subjecting to the test given in 5.3 shall be stored in such a manner that there is no deterioration of the material during storage.

**B-1.2** The samples shall be protected against adventitious contamination.

**B-1.3** The sampling instruments shall be clean, dry and sterile.

**B-2. SCALE OF SAMPLING**

**B-2.1 Lot** — All the containers in a single consignment of the material packed on the same day and of the same grade shall constitute a lot. If the consignment is declared to consist of material packed on different dates, the material shall be separated datewise and the containers of the same type and grade shall be grouped to constitute a lot.

**B-2.1.1** Samples shall be tested from each lot for ascertaining conformity of the material to the requirement of this specification.

**B-2.2** The number of containers to be selected from a lot shall depend on the size of the lot and shall be in accordance with col 1 and 2 of Table 3.

**TABLE 3 SELECTION OF CONTAINERS**

NO. OF CONTAINERS IN THE LOT	NO. OF CONTAINERS TO BE SELECTED
(N)	(n)
(1)	(2)
2 to 15	2
16 „ 40	3
41 „ 65	5
66 „ 110	7
111 „ 180	8
181 „ 300	9
301 and above	10

**B-2.3** The containers shall be selected at random. In order to ensure randomness of selection, a random number table shall be used. If such tables are not available the following procedure may be adopted:

Starting from any container in the lot, count them as 1, 2, 3, . . . , etc, up to  $r$  in one order, where  $r$  is equal to the integral part of the value of  $N/n$ ,  $N$  being the total number of containers, and  $n$  the number of containers to be chosen (*see* Table 3). Every  $r$ th container thus counted shall be separated until the requisite number of containers is obtained from the lot to give samples for test.

**B-2.4** From each of the selected containers, in order to select at random the required number of fresh seer fish, the Table 3 may be applied here. Column 1 may be taken to represent the number of seer fish in a container and col 2 may be taken to represent the number of fresh seer fish to be selected.

### **B-3. NUMBER OF TESTS**

**B-3.1** Each of the fresh seer fish selected in **B-2.4** shall be tested for all the requirements of this specification.

### **B-4. CRITERION FOR CONFORMITY**

**B-4.1** The lot shall be declared to be in conformity with all the requirements of this specification when all the fresh seer fish selected in **B-2.4** satisfy the corresponding requirements (*see* 5).

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